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F…

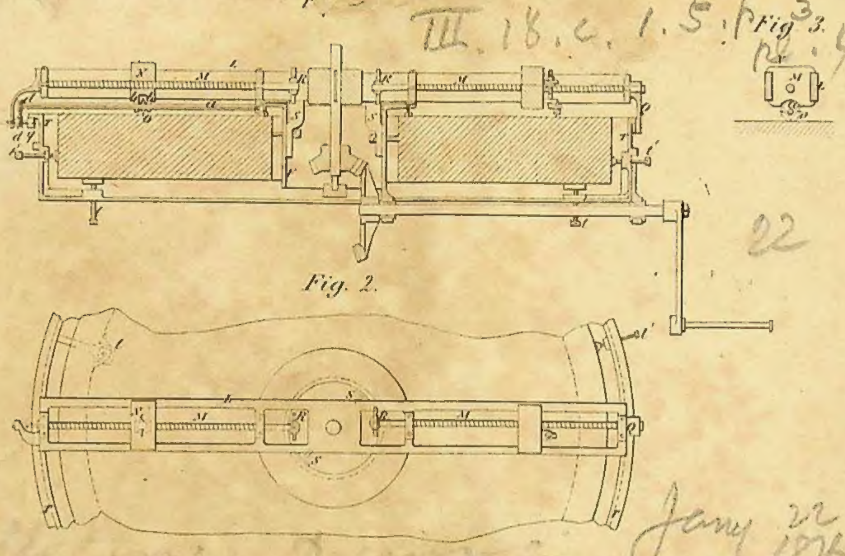
Fig. 3.
N
M
L
R
a
b
d
q
r
s
S
t
t'
Z
a'
Fig. 2.

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Jany 22 1876

Translation for Div.38.

French Patent No.111176, dated January 22, 1876, to LETOURNELLE, for Millstone Dressing Machine.

The following is a certificate of addition dated Dec.26, 1876.

Pl.IV.

In this addition I will describe certain modifications which I propose to make in the construction and operation of my millstone dressing machine.

1. For the iron circle or ring which serves to level the millstone with the machine and to guide the latter, I substitute a cast-iron cup T.

This cup, the bottom of which is hollowed (*évidé*, may also mean *slotted*), supports the base of the millstone by means of three vertical screws *t*, which thus render it possible perfectly to regulate the portion of the upper surface to be dressed; laterally the millstone is centered relative to the casing F.

The flange of the cup serves the same purpose as the groove of the circle or ring, i.e., to guide the roller arm Q, which is substituted for the end support of the worm.

There is no longer any need of this support owing to the new arrangement of the cross-bar (or cross-beam) L, which is balanced as explained below.

2. The prolongation or extension of the cross-bar L, instead of being of wood, is of cast iron. It serves here also as a counter-weight for the part which carries the mechanism of the dressing tool. But the main part of said mechanism, i.e., the ratchet R of the worm M and its tappet (or catch or stop)S, is located at the center close to the inner casing, while it was originally on the outside.

It will be seen that the catch S is secured to the inside of the casing F, on which rests the middle of the cross-bar L.

The ratchet and its catch thus located at the center of the apparatus no longer interfere with the working of the cross-bar during the dressing operation.

3. I have preserved the employment of the diamond as dressing tool, but in place of the arrangement of the straight diamond tool holder I may use a tool holder having a circular movement. To simplify matters, I have assumed the extension of the cross-bar to be adapted to this new arrangement of the tool, figs.1 and 2.

One or more diamonds are secured to the periphery of the small disk O, which is mounted on a small ~~spindle~~ shaft a extending parallel underneath the worm.

The disk is inserted between the lugs b of the nut N designed to drive it, and it slides in the longitudinal groove provided on the shaft which imparts to it its rotary movement. Said shaft a receives this movement from the roller g by means of a cord passing over two small grooved pulleys d, one of which is keyed on the end of the shaft.

The rotary diamond, like the vertical diamond of the earlier arrangement, works by describing a spiral path on the millstone.

4. To enable millstones to be dressed in any direction, I use either type of my diamond holders on an independent frame which is simply placed on the flanges of the cup T. Said frame forms a guide for the tool holder slide, which is thus moved in the required direction.

In all these arrangements it is the tool which moves while the millstone is stationary. I may find it expedient to reverse this action and arrange the apparatus in such a manner that the millstone will rotate under the stationary diamond tool holder.

To sum up, this addition comprises the following characteristic points:

1. The arrangement of the millstone on a flanged cup, enabling it to be placed on a level with the machine and to guide the latter in its movement.

2. The central location of the ratchet and catch which cause the rotation of the worm, and hence control the radial movement of the tool in the cross-bar, which is entirely of iron or cast iron.

3. The rotary arrangement of the dressing tool consisting of a disk fitted with diamonds and set in rotation by the movement of the guide roller.

4. The guide frame placed loosely on the cup to enable the stone to be dressed in any direction.

N.E.K.
8-12-18